

We mention this extraordinary disparity in length between certain of these lectures to give ourselves the opportunity to notice the common practice of publishing lectures in which the reader is left to suppose that they were wholly extemporaneous, and were reported phonographically, the busy author not finding time to do more than make a few hurried corrections of the notes of the reporter; and yet the lecture often bears all the marks of careful elaboration, or, as in the present case, possesses characteristics utterly at variance with, to say the least, an average experience in such matters.

If one must publish a lecture which was never delivered, or not as it was delivered, either let the proprieties of the case be observed, or a frank explanation be made of its anomalous features.

We would not wish to be understood as specially censuring the course of M. Vulpian in the matter under discussion, but we have felt we ought not to let the occasion pass for noticing some of the unpleasantly suggestive characteristics of too many of our published lectures, whether in periodicals or books.

But we cannot, in this notice, follow M. Vulpian's admirable and instructive book any farther. To adequately examine it, and extract passages of interest to such of our readers as may not meet with the work itself, would be to us a pleasant but a long task. We have intended from the first to examine with some care only the first few lectures, that we might show our readers something of the valuable data and of the suggestive and critical reflections on the same with which the work abounds. More than this we cannot do at present.

It is the avowed intention of the author to continue his studies until he has produced a complete work on the nervous system, in its clinical aspects, in which studies all the resources of anatomy, whether healthy or morbid, and of physiology, whether human or comparative, are to be brought to bear in the hand of a master on the clinical and pathological phenomena of nervous disease, which must continue for a long time in the future, as in the past, to challenge and perplex even critical and cautious observers such as M. Vulpian. We are afraid the time is yet distant when works of this character will be much in demand by the profession of this country.

II.—ANATOMY OF THE NERVOUS CENTRES.

ANATOMIE DES CENTRES NERVEUX. Par le Professeur G. Huguenin. Traduit par le Dr. Th. Keller; annoté par le Dr. Mathias Duval.

The appearance of this translation is an evidence of the widespread interest which is being manifested by the French for the results obtained by German cerebral anatomists; and since the

original owed its chief importance to the fact that it popularized, so to speak, the views of Meynert, the translation may be considered a tribute to the ingenious deductions of the latter author, the recognition of whose services to the cause of *applied* cerebral anatomy had its way paved by no less a one than Charcot.

Inasmuch as the translation has had added to it numerous annotations by a French investigator, its criticism naturally falls into two parts—the first relating to the original, the second to the corrections, explanations and comments of Dr. Duval. As to the translation as a translation, we can only speak in high commendation; the French rendition is both correct and above all fluent, and as free as every good translation should be.

Among the pupils of Meynert, Huguenin has become to be considered a leading representative, from the mere fact that he was the first to give to the medical public a simplified version of his teacher's "projection theory." In fact, Huguenin's book may, aside from some abstractions from Koelliker's embryology, and Gratiolet and Leuret, be considered a rather faithful transcription of the lectures delivered by Meynert at the Vienna University. This resemblance extends so far that we even recognize in the diagrammatic representations of Huguenin's work most of the blackboard drawings which that master employed to illustrate those lectures. From the fact that the original contained no clear references to the sources from which the more elaborate illustrations were obtained, it is to be excused that the French translators have equally failed to indicate them. They have, as it is, improved on the original in so far as they furnish the description of the figures at the bottom of the respective pages, to the great convenience of the student.

Since many of the views presented by Huguenin have since, or even before the appearance of his book, been shown to be faulty, it may be well to call attention to some of the more prominent errors:

Page 1. The author states that the parts on each side of the primitive groove are the medullary laminae, speaking of the origin of the nervous central axis as originally double, and confounding the primitive groove and medullary gutter. The medullary lamina is single and axial *ab initio*, and the groove and tube formed by its incurvation have nothing to do with the primitive groove!

His views on the disappearance of the embryonic roof of the thalamencephalon are likewise antiquated and incorrect. And it has now been shown that the spinal ganglia are not derived from the mesoblast (p. 15), but from the medullary tube itself. (Balfour, Shenk, Götte and others.)

As far as the rendition of the projection system is concerned, Huguenin has naturally adopted all the errors of Meynert's first publications, without a word of that correction which justice to the researches of Gudden and the most eminent of Meynert's own pupils, Forel, would seem to demand. Thus the erroneous

and utterly unfounded view, that the oculo-motor nuclei are under the direct innervation of the cortex, is reproduced. The thalamus is stated to be a reflex centre, a view which was never expressed by Meynert in this crude way: the latter considered it a presiding ganglion of the higher automatism.

On page 26 it is stated, evidently in the haste of transcription, that the corpus restiforme goes into the *anterior* columns of the cord!!! That this gross clerical error escaped the annotator is remarkable. At the same place the enumeration of the cerebellar peduncles is so confused that one would from the reading be led to infer that the *brachium pontis* and the transverse fibres of the pons were two different systems, whereas they are but one system.

In describing the gyri and sulci of the hemispheres, the system of Gratiolet is the one chiefly followed, and the more modern researches are but briefly dwelt on.

Figure 57, illustrating the anatomy of the fourth ventricle, is doubly incorrect. It makes it appear as if there were a special nucleus between the median fissure, striæ medullares and *ala alba medialis*, while the anterior half of the floor is still more inexact, and unlike anything ever found in nature. There is a great lack of clearness on Huguenin's part, where he speaks of the olfactory bulb and lobe without exhibiting their different location in any of his figures. The view that both the anterior and posterior pair of the corpora quadrigemina are centres of vision, as maintained by Huguenin, has now been totally exploded: Gudden having shown that extirpation of the eye in the new-born leads to atrophy of the anterior pair alone; Forel having demonstrated that no optic fibres enter the posterior pair, which is well developed in the blind mole; and we having called attention to the fact that in reptiles, in whom, contrary to current views, the posterior pair is present, these are developed independently of the anterior pair, and in demonstrable relation with none of the optic fasciculi.

The tract of the lemnisci, as given by Huguenin, is also highly problematical. Through carelessness one of the wood-cuts given to illustrate their course, is given as inverted, and Fig. 103, lower down in the series, makes the vertical (pyramidal) fibres of the pons appear as if they coalesced, thus giving, unintentionally of course, a wrong impression. The term, "*superior* root of the trigeminus," is certainly inapplicable to the bundle so designated in figure 110.

Unfortunately, Prof. Huguenin, while he has not failed to introduce a large number of figures to illustrate the superficial anatomy of the brain in lower animals, has neglected to employ such as are calculated to elucidate the predominance of the *pes pedunculi* in man as contrasted with the tegmentum. A footnote of Dr. Duval makes up for this defect, but of course only partially.

The very plausible diagram on page 203 loses its value in view

of the incorrect assumption of an origin of the optic tracts in the posterior pair of the corpora quadrigemina, referred to above. In Fig. 119 the extent of the trapezium in the baboon is exaggerated, and the olivary eminence diminished, while in Fig. 121 the sheep's trapezium is represented as smaller than it is in reality. Some of these imperfections are of course of no great importance, and in so far as the book was intended to serve as a guide to the beginner, it might be expected that the annotations of Dr. Duval would correct all possible misapprehensions of the actual state of cerebral anatomy by giving the most recent results in his foot-notes.

In their introductory remarks the translators state that they have not quoted the writings of Flechsig and Forel, because these authors had offered few or no positive results. We think that negative results are under occasion as important as positive ones; and we consider it as detracting seriously from the value of this translation that the very decisive researches of Forel on the fallacy of the oculo-motor and visual innervations, as given by Meynert, were not presented *at least* as current views entitled to some consideration!

On page 2, the first annotation, although written in misapprehension of the text, serves to correct its errors, and proper views as to the relations of the medullary groove referred to are given. The next annotation states that the cornu ammonis and the "trigone" are one and the same thing, merely on the ground that the fibres of the fornix are derived from the cornu ammonis! On the same grounds the author might say that the cerebral cortex and the internal capsule were "*qu'une seule et même chose*." The charming naiveté of the French appears in the statement that the study of the gyri of the hemispheres is the "order of the day."

Duval's idea that the crucial sulcus of the dog is the analogue of the perpendicular occipital of man, would be untenable for a moment, even if Meynert had not shown the true homologies from the bear's brain. He neglects to point out, while insisting that the nucleus oculo-motorius and n. trochlearis are distinct, that their molecular grey matter is continuous. If the annotator's ingenious views regarding the origin of the intermediate nerve of Wrisberg, presented on page 211, is correct, then the physiological and anatomical problem of the gustatory innervations is solved.

To the error regarding the olivary nucleus dentatus, an article in the JOURNAL OF NERVOUS AND MENTAL DISEASE, has already called attention. We would not refer to it here were it not that the annotator has during the last few years repeatedly proclaimed his alleged discovery, that the animals inferior to the quadrumana in the scale had no *nucleus dentatus*. They have unquestionably, and Duval's statement is based either on imperfect or fallacious observation.

On page 247 a very useful annotation is made to clear up the

metamorphosis of the cord into the medulla oblongata. It is unfortunate that the author has inverted all the eight figures so as to make the ventricular floor the inferior aspect, and the basilar parts the superior. This he has done to accommodate the cerebral sections to the spinal ones figured in the conventional way. Now, as it was easier for Mahomet to go to the mountain than for the latter to come to the former, so it would have been far simpler to invert the spinal sections from their customary and incorrectly figured position, than to turn the entire brain upside down.

On the whole the work will prove more useful to him who desires a general view of the cerebral architecture than to him who desires correct topographical information. In presenting it to the French medical public the translators have done a service which cannot be undervalued. The views of the cerebral functions, their complexity, and the manifold tracts subservient to them, which have been promulgated by Meynert, will serve by becoming familiar to the French medical public to act as a healthy antidote against the vagaries which, whether in the shape of the "nihilism" of Brown-Sequard or the metallo-therapy of his great opponent, can only be founded on an imperfect conception of the nervous mechanism.

While we do not hesitate to insist that in many respects the work of Huguenin is faulty, and that its translators have failed to correct some of the more serious errors, it must be admitted that there is no better *readable* version of modern cerebral anatomy in the market than the present one. We may hence be permitted to hope that a still better and safer guide to the cerebro-spinal anatomy will be furnished to the American reader in the forthcoming American edition, which by more careful notes, better illustrations, and above all, a due reference to cotemporary researches, will avoid the errors as well of the original as of the translation before us.

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III.—HANDWRITING : ITS PHYSIOLOGY AND PATHOLOGY.

DIE SCHRIFT: GRUNDZUEGE IHRER PHYSIOLOGIE UND PATHOLOGIE.

(*Handwriting: its Physiology and Pathology.*) Von Dr. A. Erlenmeyer. Stuttgart: Adolf Bonz & Co., 1879.

In his preface the author informs us that he has collected specimens of handwriting of patients for some years, and that on reviewing them for publication, so many questions turned up that he was forced to prepare some physiological ground for the subject; hence its publication in the form of a brochure of some 70 pages. The book commences with some reflections on the cause of the direction of script. The habitual writing of European nations from left to right, the author attributes to the